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ABSTRACT

Children's intrinsic motivation for school work has been recognized as an important contributor and predictor of school achievement. It is characterized by enjoyment and valuing of learning for the inherent pleasure its accomplishment brings. Important features include curiosity, persistence, autonomy, a mastery orientation, and a preference for challenging tasks. Most intrinsic motivation research has focused on college students, adolescents, and children in middle childhood. This study targeted school beginners. Young children vary in the extent to which they are intrinsically motivated toward academic work, but the development of this motivation is not fully understood. The study's participants were 48 boys and 35 girls from 8 first-year classes in 5 Auckland (New Zealand) elementary schools. Measures included: (1) academic competence; (2) social competence; (3) perceived social competence; (4) perceived academic competence; (5) academic intrinsic motivation; and (6) teacher questionnaire. The study showed children's perceptions of their social competence as the largest contributor to their intrinsic motivation for school work. Children's social behavior, as perceived by their teachers, was also strongly related to academic performance. Contains 31 references. (BGC)

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The Influence of Perceived Social Competence on School Beginners' Emergent Academic Intrinsic Motivation

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The influence of perceived social competence on school beginners' emergent academic intrinsic motivation

Children's intrinsic motivation for school work makes a strong contribution to the success of their educational careers. Academic intrinsic motivation has been recognized as an important contributor to and predictor of school achievement, measured by both teacher grades and standardized achievement scores, enjoyment of school, and use of autonomous regulatory strategies (Deci, Vallerand, Pelletier, & Ryan, 1991; Gottfried, 1985, 1990; Harter, 1981). Academic intrinsic motivation is characterized by the enjoyment and valuing of learning for the inherent pleasure its engagement and accomplishment brings. Important features also include curiosity, persistence, autonomy, a mastery orientation, and an active preference for challenging and novel tasks (Gottfried, 1990; Harter, 1981). Constructs that appear to contribute to individual's academic intrinsic motivation include perceptions of one's ability or self-efficacy, and control over one's actions (Deci et al., 1991; Harter & Connell, 1984).

Most of the research and theoretical developments regarding intrinsic motivation have focused on college students, adolescents, or children in middle childhood. While this is obviously important, it is arguably equally important to consider the development of school beginners' intrinsic motivation for school work.

Several longitudinal studies (e.g. Alexander & Entwisle, 1988; Alexander, Entwisle, & Dauber, 1993) have shown that children establish remarkably stable educational trajectories from as early as first grade. Studies have found that various measures of performance in first grade (e.g. children's grades and standardized achievement test scores) are significant predictors of long-term academic difficulties and dropping out of high school (Ensminger & Slusarcick, 1992; Simner & Barnes, 1991). In short, it appears that children's early levels of academic achievement tend to be relatively stable throughout their school careers. It has been argued therefore that first grade is a "window of opportunity" whereby children develop the foundations of these trajectories (Alexander et al., 1993, p.813). Consequently, it is important to further understand factors which influence the development of young children's academic intrinsic motivation, while they are beginning to establish their academic trajectories.

Despite its importance, there has been relatively little research investigating the early development of intrinsic motivation. However research has shown that academic intrinsic motivation is a valid construct for school beginners (Gottfried, 1990). In her longitudinal study Gottfried found that children developed a consistent motivational orientation within the first years of school, which became

increasingly stable over time. Components of motivation (such as self concept of ability and task value) have also been reliably measured using subjects from first grade (Eccles, Wigfield, Harold & Blumenfeld, 1993).

As noted, many of the models of academic intrinsic motivation address children from middle childhood on. One path model which depicts constructs contributing to intrinsic motivation was developed by Harter and Connell (1984) and tested using third to ninth grade students. Harter and Connell proposed, and found supporting evidence, that students' academic performance influenced their evaluations of their academic competence. This competence evaluation influenced, in turn, their affective reaction to their academic competence. Finally, intrinsic motivation was influenced jointly by the student's competency evaluation and, to a lesser extent, the ensuing affect the evaluation generated.

While Harter and Connell (1984) found that their data fitted the processes influencing academic intrinsic motivation during middle childhood and early adolescence as they hypothesized, there are reasons to believe that a different process may occur in young children beginning school. In particular, the path between children's actual academic performance and their perceptions of their academic competence may not apply to young children. Research has identified marked developmental differences in perceptions of both one's own and others' academic competence.

Young children have been shown to be poor at forming accurate perceptions of their ability (Nicholls, 1978; Stipek, 1981, 1984b). Until about second or third grade children's perceptions of their academic competence are typically unrealistically higher than, and uncorrelated with, teachers' grades (Nicholls, 1978; Stipek, 1984b). When asked to evaluate their own ability young children typically give marked over-estimations, compared to their more objectively-rated performance (Nicholls, 1978; Stipek, 1984b). Young children also tend to attribute higher ability to themselves than to another equally successful person they have observed (Stipek & Hoffman, 1980). In accounting for the differences in expectations for oneself and peers following identical performances, Stipek (1984b) argued that an element of wishful thinking interferes with young children's logical reasoning, rather than this being due to a cognitive deficiency.

The discrepancy between children's estimations of their performance and their more objectively rated performance has been attributed to their conceptions of ability as being unstable. Conceptions of ability, which influence children's perceptions of their own competence, have been shown to undergo developmental

changes: "the meaning of ability as well as the method of inferring it changes with age" (Nicholls & Miller, 1984a, p. 200). Young children appear to perceive high ability as being concomitant with high effort and outcome. Ability, rather than being viewed as a relatively stable and fixed entity, is seen as being unstable and influenced by practice and effort. It is not until children are approximately 10 or 11 years old that they appear to completely understand the relationship between effort and ability - that requiring greater effort signals lesser ability. Therefore children frequently justify competency judgements with evidence of good work habits and high effort expenditure (Nicholls, 1978; Nicholls & Miller, 1984b; Stipek, 1984a). This is supported by Stipek and Tannat's (1984) finding that preschool to third grade children did not make a clear distinction between ability and effort when asked to rate and explain their own and their classmates' academic competence.

It may also be difficult for young children to gain feedback about their academic performance. In school classrooms, performance outcomes and feedback are typically not highly salient, congruent or systematic. Teacher feedback is often focused more on procedural issues and classroom conduct than on children's academic performance (Blumenfeld, Pintrich, Meece, & Wessels, 1982). Since teachers' use of praise in the early school years is often not contingent on academic performance (Brophy, 1981), teacher approval and reinforcement may be sufficient to maintain high perceptions of competence, despite poor objective or normative performance (Stipek, 1984b).

However, while the academic ability or competency evaluations of young children may not be influenced by objective academic performance, it does appear that young children's ability perceptions are related to their level of academic intrinsic motivation (Gottfried, 1990), as occurs with older children (Harter & Connell, 1984).

In summary, it is apparent that young children differ in the extent to which they are intrinsically motivated towards their school work, but the process whereby their motivation develops is still not fully understood. It appears that perceptions of academic or cognitive competence are probably not caused by school achievement in the early years of school, as they are in middle childhood and adolescence. One factor that may be an important component of both perceived academic competence and academic intrinsic motivation in young school children is self-perceptions of social competence.

It appears that for young children their level of social competence in relating to others has an important effect on their school performance. Measures of

children's social competence have often been found to be a stronger predictor of academic achievement than were measures of their intellectual ability (Wentzel, 1991a). There is evidence that children's sociability, as measured by child and teacher sociometric ratings of peer status and the number of friends a child has, facilitates children's successful adjustment to school and academic achievement during their first year at school (Ladd, 1990; Ladd & Price, 1987). Those children who made more new friends throughout their first year at school tended to make greater gains in school performance. Conversely, early peer rejection predicted lower school performance levels over the year. Similarly, Alexander and Entwisle (1988) noted that peer popularity had a direct effect on standardized verbal and mathematics achievement scores in first and second grade. This finding is supported by Wentzel (1991b), who argues that appropriate classroom conduct and social interactions are necessary for both positive peer relationships and optimal school learning. She claims that "there is reason to believe that the direction of effects is primarily from social competence to academic outcomes" (p. 15).

Children too appear to utilize perceptions of social competence when assessing academic performance. Young children frequently base their competency judgements on the presence or absence of good work habits and high effort expenditure (Nicholls, 1978; Nicholls & Miller, 1984b; Stipek, 1984a). They also appear to pay more attention to social information, such as how well they stay out of trouble and please their teacher, and social reinforcement than they do to objective, symbolic, or normative feedback when evaluating their own academic competence (Blumenfeld et al., 1982; Brophy, 1983; Stipek, 1984b).

It appears that children confound social and academic ability when they evaluate themselves and others. When asked to evaluate how smart both they and other children are, young children tend to utilize their evaluations of social behavior and the degree of liking they have for that person (Stipek & Tannatt, 1984). "When preschool-age children ... claim that they are smart, they may mean that they behave appropriately; if they claim that another child is smart, they may mean that the other child is someone they like" (p. 83).

It therefore appears that children's socially appropriate behavior at school influences both their school achievement and teachers' perceptions of the children's academic competence. Also, young children's perceptions of their own social competence appears to be an important influence on their self-perceptions of academic competence. The influence of perceived social competence may also affect

children's academic intrinsic motivation, either directly or indirectly through perceptions of academic competence.

We propose an alternative path model showing influences on academic intrinsic motivation more applicable to school beginners. This model is shown in Figure 1. As depicted in this social competence model, we predict that both children's and teachers' perceptions of the children's social competence will influence children's academic competence. That is, perceptions of greater social competence at school (e.g. relating to his or her peers in an appropriate and satisfying way, and conforming to the teacher's expectations of appropriate social behavior) will be related to greater school achievement. We also predict that young children's perceptions of their social competence will influence their evaluation and affect regarding their academic competence, and also their academic intrinsic motivation.

Method

Participants

The participants in this study were 48 boys and 35 girls from eight new-entrant (first year) classes within five Auckland (New Zealand) elementary schools. The children had a mean age of 5 years 2 months (in New Zealand children begin school on or close to their fifth birthday). The children were predominantly White (89%), with the remainder being of Pacific Island (5%), Maori (4%), and Indian (2%) descent. All children had attended some form of preschool for at least one year before beginning school. The five schools from which the sample was taken serviced families of all socioeconomic levels. All children were required to have parental permission to participate in this study.

Measures

Academic competence. We used a teacher rating of the children's academic competence, using a 5-point scale from "extremely competent (5)" to "appears to have a significant problem (1)". This rating scale was used rather than grades or standardized achievement tests scores for a number of reasons. Firstly, New Zealand schools do not usually grade 5-year-olds. Formal achievement testing is also not usually conducted with young children, as it is generally viewed as inappropriate (Wylie & Smith, 1992). Research has found teacher ratings to be significantly correlated with measures of young children's intrinsic motivation

(Gottfried, 1990), and teacher ratings have been found to be reliable over time and across raters (Skaalvik & Hagtvet, 1990).

Social competence. We asked teachers to rate the children's social competence using a 5-point scale from "extremely competent (5)" to "appears to have a significant problem (1)".

Perceived Social Competence. We used the social competence subscale of the Perceived Competence Scale for Children (Harter, 1982) to measure the children's perceptions of their social competence. This is a seven item scale presented in a structured alternate format designed to foil the tendency for children to give socially desirable responses. Each item is scored from 1 (low perceived competence) to 4 (high perceived competence). Pilot testing with children not in this study revealed that when Harter's descriptors "sort of true" and "really true" were used 5-year-olds appeared to perceive that their truthfulness was being questioned. Therefore these response choices were substituted with the descriptors "A little bit like that" and "A lot like that". Additionally we substituted "children" for "kids" in each item, to reflect more typical New Zealand language. This scale was acceptably reliable (α=.54).

Perceived Academic Competence. To measure the children's perceptions of their academic competence we used the academic competence subscale of the Perceived Competence Scale for Children (Harter, 1982). This is also a seven item scale in the same format described above.

Subsequent to the development of the Perceived Academic Competence scale Harter and Connell (1984) further distinguished between items measuring children's evaluations of and affect towards their competency perceptions. They created two sub-scales, one measuring self-evaluative academic perceptions (3 items) and the other affect about one's competence (4 items). They did not report their criteria for forming the two scales, apart from face validity, or the reliability coefficients for these two scales. In this study we followed Harter and Connell's protocol of separating the perceived competence evaluation and perceived competence affect items, after having confirmed the presence of two separate factors using principal components factor analysis with varimax rotation. The principal components analyses identified four items concerning evaluative academic competence perceptions and three about affective academic competence perceptions.

We therefore created two scales in accordance with these results. Both scales were satisfactorily internally consistent; the perceived academic competence evaluation had an alpha of .61 while the perceived academic competence affect had an alpha of .54. These alphas are consistent with other similar scales administered to first graders (e.g. Eccles et al, 1993). Additionally, the differential pattern of correlational and regression coefficients for the evaluative and affective scores, found in both Harter and Connell's and this study, supports the validity of separating these two constructs.

Academic Intrinsic Motivation. The Young Children's Academic Intrinsic Motivation Inventory (Y-CAIMI) was developed to measure academic intrinsic motivation for grade 1 to 3 children (Gottfried, 1990). It contains four subscales - reading, mathematics, general school work, and enjoyment of difficult school work. We did not administer the math scales to the children, since mathematics instruction is usually embedded within literacy activities, is often not a separately identified subject, and does not consume much school time (approximately 13% compared to 43% for reading and writing) in New Zealand new-entrant classrooms (McDonald, Clarke, & Kidman, 1991). The scale for enjoyment of difficult school work was administered but the results were subsequently excluded from analysis since the pattern of responses indicated that the children did not distinguish between liking hard and easy work. The majority (62%) of children claimed to either like both hard and easy work, or to not like both hard and easy work, suggesting an undifferentiated view of ability and effort (that liking hard and not easy work usually denotes greater ability) which is consistent with Nicholls's (1984) findings with children of this age. The alpha for the Y-CAIMI reading scale was .65 while it was .74 for the general school work scale. Since both scales were strongly correlated (r = .78) we summed the scores to provide a single measure of children's academic intrinsic motivation. The total scale had an alpha of .83.

Teacher Questionnaire. We asked the teachers to answer six open-ended questions about their views on aspects of education and children's motivation in the early school years.

Procedure

All children were individually administered the measures in regular morning sessions of school time during the sixth and seventh weeks of the school

year. The class teachers completed the teacher rating scale for each child in their class who was participating in the study at the same time that the children were tested.

Results

The means and standard deviations for all scales are shown in Table 1 and the correlation matrix is shown in Table 2. As hypothesized, we found no significant correlation between children's academic competence and their perceptions (either evaluative or affective) of their academic competence (r=-.14 & -.05, respectively, both n.s.).

We conducted analysis of variance to examine gender differences. As there were no significant differences by gender we did not separate the results for girls and boys.

We conducted simultaneous regression analyses for each step of the model. The results of these analyses are summarized in Table 3.

Both teachers' and children's perceptions of the children's social competence contributed significantly to the measure of children's academic competence (ß=.42, p<.001, and ß=.24, p<.01, respectively). The children's perceptions of their social competence were also significantly related to their evaluative perceptions of their academic competence (ß=.31, p<.01), but not to their affective academic competency perceptions (ß=-.07, n.s.). The children's academic evaluation perceptions related significantly to their academic competency affect (ß=.38, p<.001). The strongest contributor to the children's academic intrinsic motivation was their perceived social competence (ß=.35, p<.01), although affective academic competence perceptions also made a significant contribution (ß=.23, p<.05). Children's academic competence evaluations did not make a significant independent contribution to their intrinsic motivation (ß=-.10, n.s.).

Discussion

The regression analyses provide support for our model, whereby young school beginners' perceptions of their social competence with peers influenced their evaluations of and affect about their academic competence. Children's perceptions of their social competence also was the largest contributor to their intrinsic motivation for school work; affect regarding their academic competence, although not competency evaluations, was also a significant predictor. This suggests that children who feel that they have a sufficient number of friends and who feel

comfortable and skillful in relating to their peers at school are more likely to perceive themselves as being academically competent and demonstrate greater intrinsic motivation toward their school work. This finding supports the argument that on beginning school, children's social needs must first be addressed before they can begin adequately confronting academic learning at school (Krappmann, 1985; Ladd, 1990; Ladd & Price, 1987).

Children's social behaviors, as perceived by their teachers, was also strongly related to their academic competence. This lends support to Entwisle et al.'s (1986) claim that "children's conduct often affect their ...[learning], which suggests that children of this age [grades 1-3] who are well-behaved are learning more, or at least being evaluated more favorable by teachers" (p. 605).

Exactly what behaviors comprise optimal classroom social behavior was not directly investigated in this study. However indications of teachers' expectations can be taken from their questionnaire responses. The teachers believe that it is important for children in first-year classes to be happy, confident, independent and responsible, to be able to socialize with other children and make friends, and to follow simple instructions. These responses are very similar to Patrick, Yoon, & Murphy's (1995) finding that teachers' perceptions of children's agentic (e.g. independent, outgoing, self-confident, a leader), nurturing (e.g. co-operative, follows rules, cares for others), and nervous characteristics (e.g. not nervous or overly sensitive) were strong predictors of teachers' perceptions of the children's social competence.

While both teachers' ratings and children's perceptions of children's social competence both influenced ratings of academic competence, they were unrelated to each other. This finding suggests that teachers attend to different behaviors than do the children themselves when both evaluate the children's social competence. This difference between the teachers' and children's perceptions, therefore, implies that it is important to identify the social behaviors that both teachers and young children consider to be integral to socially competent behavior.

The non-significant correlations between children's academic competence and their evaluative and affective perceptions of their competence, as well as their intrinsic motivation, supports our proposed model. These findings suggest a major developmental difference between factors influencing intrinsic motivation in young and older children.

The findings of this study have direct implications for both parents and teachers of children beginning school. The primacy of measures of young children's

social competence suggests that the ability to successfully function and relate to others socially is a pre-requisite for successful school adjustment and achievement. Parents of young children need to be aware that an important part of assisting their children's early school career includes providing their children with opportunities in which they can develop their social skills and relate positively to peers. Teachers need also to be aware of the importance in attending to the social comfort of school beginners, as they are establishing their educational careers.

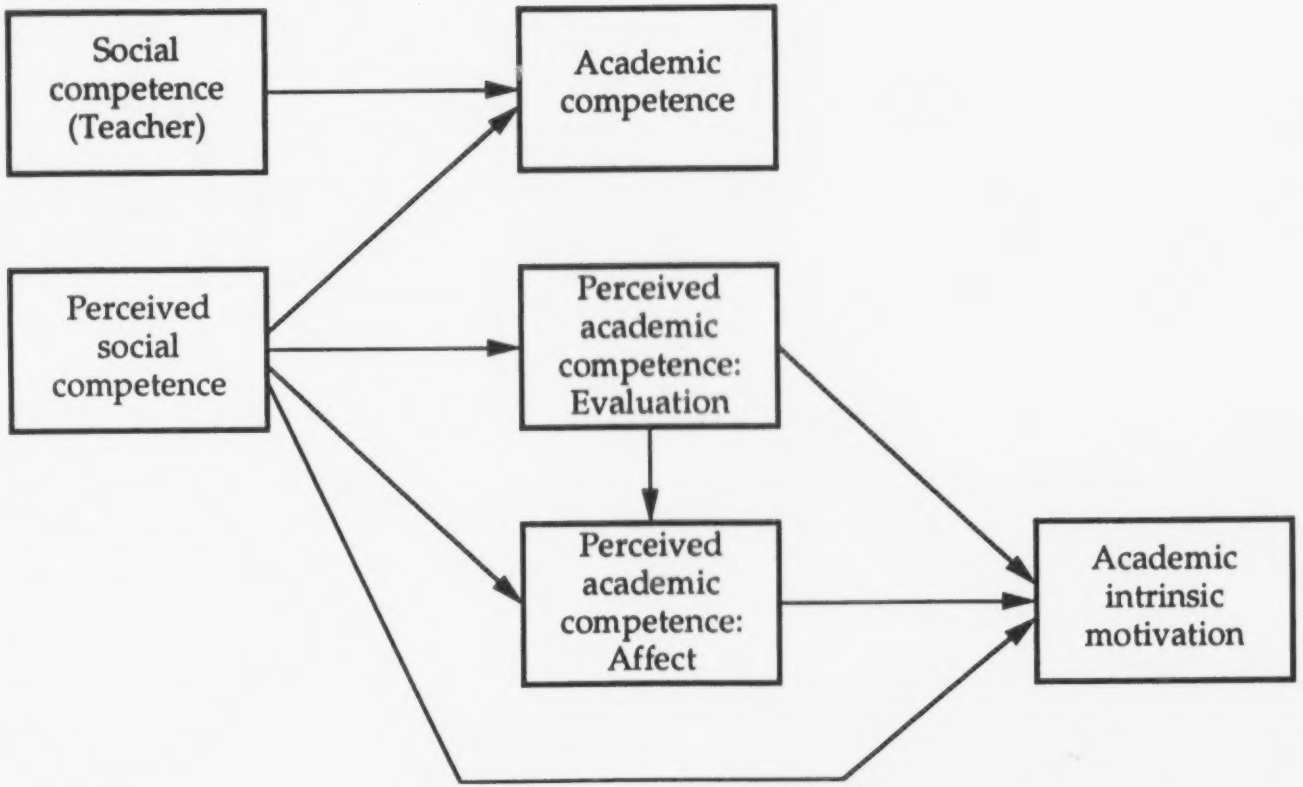

Figure 1. Social Competence Model of Young Children's Intrinsic Motivation

Table 1

Means and standard deviations of all measures (N=83)

Measures	M	SD
Academic Competence (Teacher rating)	3.35	.95
Social Competence (Teacher rating)	3.39	.75
Perceived Social Competence	15.61	3.22
Perceived Academic Competence: Evaluation	13.11	2.53
Perceived Academic Competence: Affect	9.10	2.30
Academic Intrinsic Motivation	57.11	7.65

Table 2

Correlations of all measures

	Academic Competence	Social Competence	Perceived Social Competence	Perceived Academic Competence: Evaluation	Perceived Academic Competence: Affect	Academic Intrinsic Motivation
Academic Competence	-					
Social Competence	.45 **	-				
Perceived Social Competence	.29 **	.13	-			
Perceived Academic Competence: Evaluation	-.14	-.09	.31 **	-		
Perceived Academic Competence: Affect	-.05	-.01	.04	.36 **	-	
Academic Intrinsic Motivation	.16	-.03	.33 **	.08	.20	-

** $p < .01$

Table 3

Path Analysis Results

Predictors	Academic Competence	Perceived Academic Competence: Evaluation	Perceived Academic Competence: Affect	Academic Intrinsic Motivation
Social Competence	.42 ***			
Perceived Social Competence	.24 *	.31 **	-.07 *	.35 **
Perceived Academic Competence: Evaluation			.38 ***	-.10
Perceived Academic Competence: Affect				.23 *
R square	.25	.09	.13	,15

All values are standardized partial regression coefficients

* $p < .05$ ** $p < .01$ *** $p < .001$

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